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Case Report

# TO REPORT A CASE OF OCULAR ZOONOTIC INFESTATION OF *DIROFILARIA REPENS*

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**ABSTRACT**

To report a case of ocular zoonotic infestation of Dirofilaria Repens.

**Keywords:** *Dirofilaria repens*, Zoonosis, Eosinophilia, Parasite.

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## INTRODUCTION

*Dirofilaria* infestation is uncommon in humans and rarely involves eyes. A parasite name *Dirofilaria* which belongs to family *Onchocercidae* of order spirudia and phylum *Nematoda* causes this disease. It is transmitted by mosquito bite to humans, as they are reproductively inactive in humans so no systemic treatment is required.

## CASE REPORT

A 42 year old male patient came to outpatient department with chief complaint of swelling in the right eye laterally associated with redness, pain and foreign body sensation for 3 days. By occupation, he was a

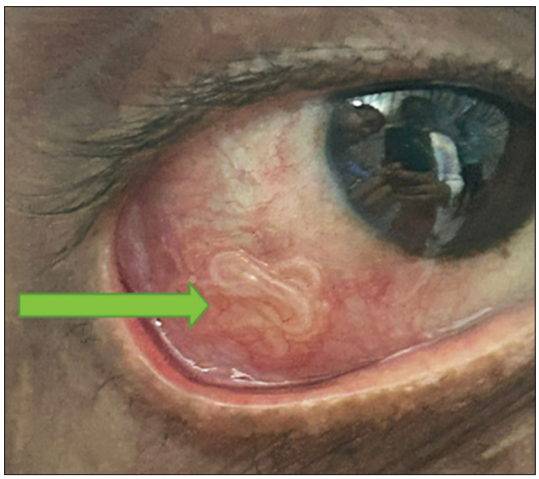

**Fig. 1: On torch examination**

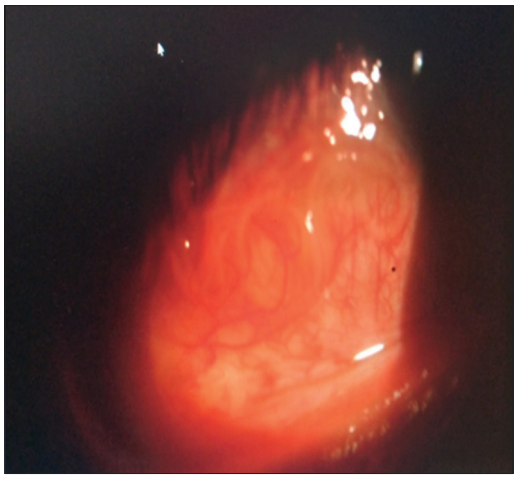

**Fig. 2: On slit lamp examination**

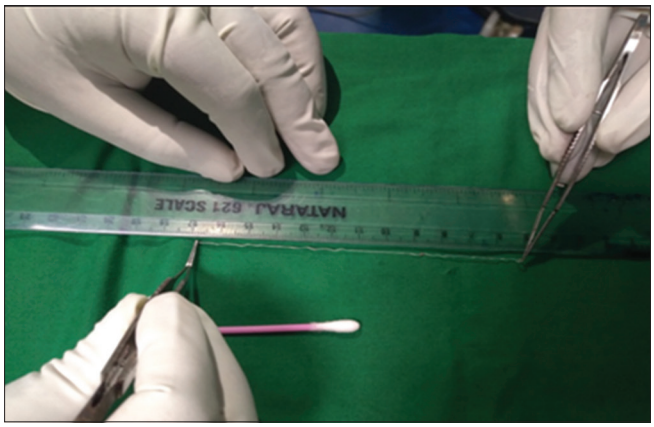


**Fig. 3: Length of worm measured by scale was 12 cm**

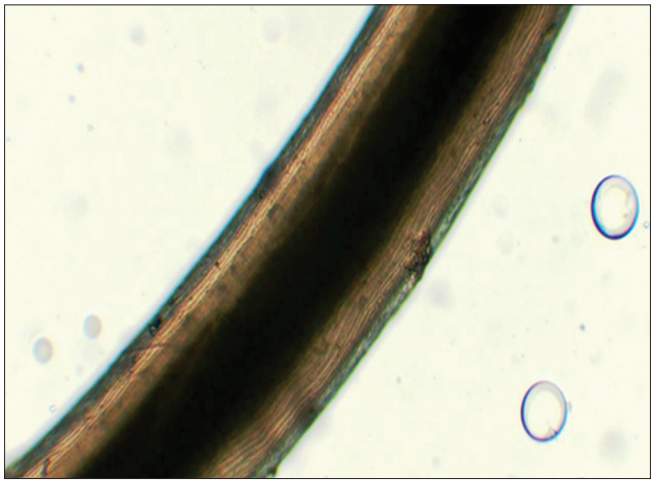

**Fig. 4: Longitudinal cuticular ridges**

**Fig. 5: Damaged anterior end of worm which was damaged during transportation and fixation process**

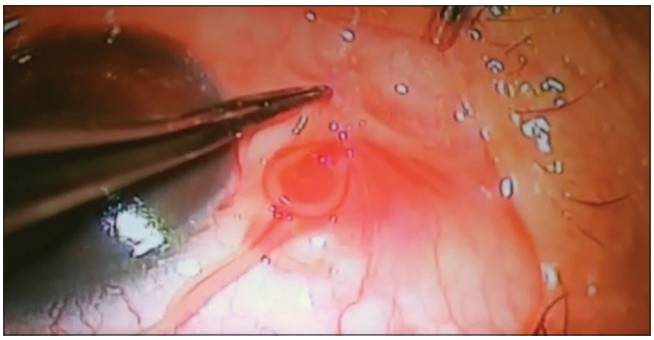

**Fig. 6: Worm removed by holding with foreceps**

farmer with live-stock rearing and handling with street dogs. The best corrected visual acuity in both eyes was 6/6. On slit lamp examination, the right eye showed swelling, hyperemia, and moving worm under bulbar conjunctiva (Fig. 2) rest anterior segment unremarkable. Left eye anterior segment unremarkable. Both eyes posterior segment unremarkable.

Laboratory investigations revealed on peripheral blood smear normocytic and normochromic eosinophilia. Stool culture showed eggs of strongyloides stercoralis. Urine routine and culture were normal. Abdominal ultrasound and chest X-ray were normal. Gross microbiological examination was done and depending on the morphological features (Figs. 3-5) it was diagnosed as *Dirofilaria repens* worm. Provisional diagnosis was made of *D. repens* worm.

**Treatment**

Urgent removal of worm was done by making conjunctival incision with scissor and then live worm was removed by holding with forceps (Fig. 6). Procedure was done under topical anesthesia. Patient was given antibiotic and anti-inflammatory drops for 1 week and eye was quite in follow-up visits.

## DISCUSSION

*Dirofilaria* infestation in eyes occurs rarely. Their definitive hosts are dogs, cats, raccoon, bear, and other wild animals. Mosquitoes (*Aedes*, *Culex*, *Anopheles*) are intermediate hosts. Transmission to humans occurs through mosquito bite. They are reproductively inactive in humans, so no systemic treatment is required. Humans are most commonly affected by species named *D. repens* and *Dirofilaria immitis*. In eyes *Dirofilaria* can be found subconjunctivally, or in tenon's layer, periorbital tissue (lids, orbit) [1,2] and intraocularly (anterior chamber [3], vitreous). Based on microscopic morphological features like cephalic spaces, longitudinal ridges, and total length, diagnosis was made. The longitudinal ridges are characteristic feature of *D. repens*, as these are absent in *D. immitis* [4].

## CONCLUSION

Ocular infection by *Dirofilaria* is not commonly known. However, as the incidences are increasing of ocular infection, it necessitates awareness among ophthalmologists and public.

## ETHICAL APPROVAL

The study was approved by the institutional ethical committee.

## CONFLICT OF INTEREST

Nil.

## FUNDING

No financial interest.

Written informed consent of the patient's guardian was taken.

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